NASA
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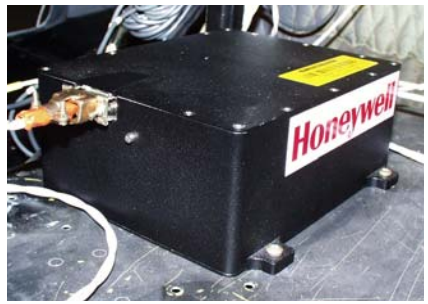
Success
Stories

Flight Test of a Propulsion Monitoring and Diagnostic System

Honeywell Laboratories, Aurora Flight Sciences

TECHNOLOGY

The Propulsion Monitoring and Diagnostic System (PMDS) is designed to independently monitor the performance of general aviation aircraft piston engines. It will have the capability to detect and isolate the most common engine faults. The PMDS provides continuous status information to the pilot and also provides data to ground personnel to assist in maintenance-related decisions. Technology development was initiated under the NASA Advanced General Aviation Transport Experiment (AGATE) program and continued under the NASA Aviation Safety Program culminating with a flight test demonstration of the technology.



PMDS Hardware

Aurora Flight Sciences Flight Test Aircraft

COMMERCIAL APPLICATION

- The PMDS is targeted for general aviation aircraft piston engines equipped with electronic engine control systems. The technology has tremendous potential given the complexity, harsh-environmental conditions, and natural degradation that this machinery exhibits.

SOCIAL / ECONOMIC BENEFIT

- Increased safety and reliability
- Reduced operating costs

NASA APPLICATIONS

- Potential applications include NASA or U.S. government general aviation aircraft equipped with electronic engine controls

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